## **Ethics for Copyrights in Software Programming**

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As a software programmer, it is important to understand software copyright protections and responsible programming. Computer program copyrights were enacted by Congress to protect an author's intellectual property from piracy and plagiarism and they also enable law enforcement to help enforce protection of the copyrights. As a programmer, you are considered to be the author of the program you developed and have a copyright privilege which doesn't expire until 70 years after your death. At that time, your program becomes public domain.

The U.S. Copyright Office defines a computer program as a literary work or "set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result." (U.S. Copyright Office 721.1) Authorship for a computer program is "expressed in words, numbers, or other verbal or numerical symbols or indicia, regardless of whether that expression has been fixed in tapes, disks, cards, or any other tangible medium of expression. However, the fixed program must be used directly or indirectly in a computer." (U.S. Copyright Office 721.1)

For those who violate the federal copyright statutes, penalties are found on the U.S. Department of Justice's website and list punishments for unauthorized reproduction or distribution of software which range from misdemeanors to up to 10 year imprisonments, up to \$250,000 fines, or both. (U.S. Dept of Justice). Internationally, the World Intellectual Property Organization (WIPO) oversees the 1886 Berne Convention which deals with the protection of authors and their literary works. Due to the large assembly of participating countries, it has not yet standardized or mandated the level participation for the protection for software copyrights.

Besides the governmental legal implications, violation of copyright laws can even lead to civil lawsuits to recoup financial losses.

There are websites available for public downloading without having to research the ownership of the program and then seeking permission to use it. I looked at MIT License, Apache 2.0, and GNU General Public License v3.0. I selected the MIT License because it had the shortest list of terms and conditions while providing for commercial and private modification and distribution. For my current software programming projects, they probably are already available as an open source already.

Reusing code from the internet is an area where copyrights may apply. Additionally, this is also a circumstance where you, as a programmer, will need to apply an ethical approach. If you are reusing code for classwork, or using it to make money from it, does it matter to pay attention to ownership of a program?

Yes it does. Using the software in a responsible manner will help the programmer keep a moral compass. David Carnes, who authored an article on software copyrights for the website Legal Beagle says: "except for the "fair use exemption" by an educational organization using the coding in a socially beneficial manner, determining ownership of the program, crediting the original owner or obtaining permission to reuse it, and honestly informing the copyrighted owner how it will be used is where you can be a responsible programmer." (Carnes)

The Association for Computing Machinery (ACM) is the world's leading professional and educational computing organization and they have an established set of ethical codes which can be used within the computer science industry. My first choice in selecting an ACM ethical code when reusing internet code is "to be honest and trustworthy. Honesty is an essential

component of trustworthiness. A computing professional should be transparent and provide full disclosure." (ACM)

The second ethical code is "to respect the work required to produce new ideas, inventions, creative works, and computing artifacts. Computing professionals should credit the creators of ideas, inventions, work, and artifacts, and respect copyrights, patents, trade secrets, license agreements, and other methods of protecting authors' works." (ACM) Besides the ACM, the Institute of Electrical and Electronics Engineers (IEEE) states in their Code of Conduct: "Not misusing or infringing the intellectual property of others." (IEEE).

## Works Cited

"ACM Code of Ethics." *ACM*, https://www.acm.org/code-of-ethics

Carnes, David. "Implications of Copyright Law" legalbeagle.com, <a href="https://legalbeagle.com/12717157-implications-of-copyright-law.html">https://legalbeagle.com/12717157-implications-of-copyright-law.html</a>. 25 September 2022.

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